

REMARKS

Claims 1-6 are pending in this application. By this Amendment, claim 1 has been amended. The amendment to claim 1 is to change the wording "in accordance with" to "based on." The amendment to claim 1 is non-narrowing and has no bearing on patentability because the amendment uses alternative language and has no effect on how claim 1 is interpreted. No new matter has been added.

The courtesies extended to Applicant's representative by Examiner Tran at the interview held April 25, 2005, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below and constitute Applicants' record of the interview.

Applicants also appreciate the indication of allowability of claims 2-4. However, for the reasons discussed below, all of claims 1-6 are allowable.

On page 2 of the Office Action, claims 1 and 5-6 were rejected under 35 U.S.C. §102(e) over Evans et al. (Evans) U.S. Patent No. 6, 479,023. The rejection is respectfully traversed.

At the interview, Applicants' representative discussed the difference between the features of claims 1 and 5-6 and the disclosure of Evans.

As discussed, Applicants' invention of claim 1 calls for an exhaust gas purifying apparatus for an internal combustion engine, in which a plasma generator is mounted in an exhaust passage, comprising detection means for detecting exhaust water content and exhaust temperature; and control means for controlling at least one of two factors, frequency or voltage of an AC voltage used to operate the plasma generator, in accordance with the detected exhaust water content and exhaust temperature. As agreed at the interview, Evans fails to disclose these features.

As discussed, the Office Action alleges that Evans' control means corresponds to what Applicants describe as a control means. However, as agreed at the interview, nowhere does Evans disclose a control means for controlling at least one of two factors, frequency or voltage of an AC voltage used to operate the plasma generator, based on the detected exhaust water content and exhaust temperature as recited in claim 1. As Evans describes in col. 5, lines 21-23, "One electrode 16 was earthed and a 50 Hz sinusoidal AC voltage of ~3 kV (RMS) was applied to the other electrode 14." But all Evans is doing is applying an AC voltage of the same voltage and frequency to the plasma generator. In fact, Evans' invention may cause unexpected results, such as increased emissions or damage due to overcurrent.

As the Applicants point out on page 2, lines 14-24, "if the plasma generator is operated with an AC voltage of the same voltage and frequency, the discharge condition changes as a water content of the exhaust gas or the exhaust temperature changes. That is, if the water content decreases, the discharge cannot be accomplished, and conversely, if the water content increases, NO_x is formed by an arc discharge. This can cause unexpected results such as increased emissions, damage due to overcurrent, etc." Applicants' invention addresses this problem. Evans' invention does not.

What Evans discloses, in col. 3, lines 65-67 through col. 4, lines 1-15, is a control means for controlling the concentration of water vapor in the exhaust gas. In particular, Evans discloses a method to adjust the level of additional water vapor input into the exhaust gas by a negative-feedback and positive-feedback from sensors present in the exhaust system as part of the vehicle's on-board diagnostics. Evans also states that the source can be a supply means controlled by the vehicle's engine control unit (ECU). Evans further states that alternatively, the level of water vapor-addition can be pre-programmed to a particular set of conditions e.g. engine revolutions and/or acceleration and stored in the ECU as maps.

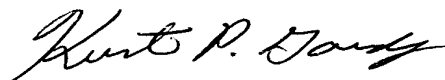
Therefore, as agreed at the interview, Evans' control means does not correspond to Applicants' control means because Evans fails to disclose a control means for controlling at least one of two factors, frequency or voltage of an AC voltage used to operate the plasma generator, based on the detected exhaust water content and exhaust temperature.

Because Evans does not anticipate or suggest the invention of claim 1, Evans cannot possibly anticipate or suggest the subject matter of claims 5-6, which depend from claim 1 for the reasons discussed with respect to claim 1 and for the additional features recited therein. Accordingly, the applied reference does not literally disclose, or suggest, all the features recited in claim 1. It is respectfully requested that the rejection be withdrawn.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-6 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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